

PATENT  
Customer No. 22,852  
Attorney Docket No. 7528.0003-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re 53(b) Continuation Application of: )  
Application No. 08/992,316 ) Group Art Unit: Unassigned  
Inventors: Todd J. MORTIER et al. ) Examiner: Unassigned  
Filed: Herewith )  
For: VALVE TO MYOCARDIUM )  
TENSION MEMBERS DEVICE )  
AND METHOD )

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**PRELIMINARY AMENDMENT**

Prior to the examination of the above application, please amend this application as follows:

**IN THE CLAIMS:**

Please cancel claim 1, and add new claims 18-44, as follows:

18. (New) A method of treating an in situ heart valve, the method comprising:  
providing a first elongate member having a first end and a second end and an anchor assembly at each of the first and second ends;  
anchoring the anchor assembly at the first end proximate the heart valve such that at least a portion of the first elongate member between the first end and the second end extends within a chamber of the heart; and  
anchoring the anchor assembly at the second end to a portion of the heart spaced from the anchor assembly at the first end,

wherein anchoring the first and second ends of the first elongate member draws together leaflets of the valve.

19. (New) The method of claim 18, wherein the anchor assembly at the first end includes an annuloplasty ring.

20. (New) The method of claim 19, wherein anchoring the anchor assembly at the first end includes anchoring the annuloplasty ring proximate an annulus of the valve.

21. (New) The method of claim 20, wherein anchoring the annuloplasty ring includes suturing the annuloplasty ring to the annulus.

22. (New) The method of claim 18, wherein anchoring the anchor assembly at the second end includes anchoring the anchor assembly to one of a papillary muscle within the heart chamber and a heart wall surrounding the heart chamber.

23. (New) The method of claim 18, wherein drawing together leaflets of the valve includes altering a position of at least one papillary muscle.

LAW OFFICES  
INEGAN, HENDERSON,  
ARABOW, GARRETT,  
& DUNNER, L.L.P.  
300 I STREET, N.W.  
SHINGTON, DC 20005  
202-408-4000

24. (New) The method of claim 18, wherein drawing together leaflets of the valve includes altering a shape of an annulus of the valve.

25. (New) The method of claim 24, wherein altering the shape of the annulus includes reducing a radius of curvature of at least a portion of the annulus.

26. (New) The method of claim 18, wherein drawing together leaflets of the valve includes altering at least one of a transverse radius and a vertical dimension of the heart chamber.

27. (New) The method of claim 18, wherein drawing the valve leaflets together includes closing the valve during at least a portion of the cardiac cycle.

28. (New) The method of claim 18, wherein the valve is a mitral valve.

29. (New) The method of claim 18, wherein the heart chamber is the left ventricle.

LAW OFFICES  
MCNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
300 I STREET, N. W.  
WASHINGTON, DC 20005  
202-408-4000

30. (New) The method of claim 18, further comprising:

providing a second elongate member having a first end and a second end and an anchor assembly at each of the first and second ends;

anchoring the anchor assembly at the first end of the second elongate member proximate the heart valve such that at least a portion of the second elongate member between the first end and the second end of the second elongate member extends within a chamber of the heart; and

anchoring the anchor assembly at the second end of the second elongate member to a portion of the heart substantially opposite to the second end of the first elongate member.

31. (New) A device for treating an in situ valve of a heart, the device comprising:

at least one curved member configured to be disposed proximate an annulus of an in situ valve so as to extend along at least a portion of the annulus; and

at least one elongate member having a first portion configured to be secured to the curved member and a second portion configured to be secured to a portion of one of a wall of the heart and a papillary muscle,

wherein the device is configured to draw together leaflets of the valve during at least a portion of the cardiac cycle.

32. (New) The device of claim 31, wherein the device is configured to alter a shape of an annulus of the valve.

33. (New) The device of claim 32, wherein the device is configured to reduce a radius of curvature of at least part of the annulus of the valve.

34. (New) The device of claim 31, wherein the device is configured to alter at least one of a transverse radius and a vertical dimension of the heart chamber.

35. (New) The device of claim 31, wherein the device is configured to alter the position of at least one papillary muscle associated with the valve.

36. (New) The device of claim 31, wherein the curved member includes an annuloplasty ring.

37. (New) The device of claim 31, further comprising at least one suture configured to connect the curved member to at least the portion of the valve annulus.

LAW OFFICES  
INEGAN, HENDERSON,  
ARABOW, GARRETT,  
& DUNNER, L.L.P.  
300 I STREET, N. W.  
SHINGTON, DC 20005  
202-408-4000

38. (New) The device of claim 31, wherein the elongate member is a tension member.

39. (New) The device of claim 31, further comprising an anchor assembly configured to be secured to the second portion of the elongate member and configured to secure the second portion of the elongate member to one of the portion of the heart wall and the papillary muscle.

40. (New) The device of claim 39, wherein the anchor assembly is configured to be fixedly secured to the second portion.

41. (New) The device of claim 39, wherein the anchor assembly is mechanically coupled to the second portion.

42. (New) The device of claim 39, wherein the anchor assembly includes an anchor pad configured to be disposed on an external surface of the heart.

43. (New) The device of claim 31, further comprising a plurality of elongate members, each of the elongate members having a first portion configured to be secured

to the curved member and a second portion configured to be secured to a respective portion of one of a wall of the heart and a papillary muscle.

44. (New) The device of claim 43, further comprising an anchor assembly configured to be secured to the second portion of each of the elongate members and configured to secure the second portion of each of the elongate members to the respective portion of one of a wall of the heart and a papillary muscle.

**REMARKS**

By this Preliminary Amendment, Applicants cancel claim 1 and add new claims 18-44. Since claims 2-17 were canceled upon filing this application, claims 18-44 remain pending.

If there is any fee due in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: October 19, 2001

By: Susanne C. Tinker  
Susanne C. Tinker  
Reg. No. 44,472

LAW OFFICES  
FINNEGAN, HENDERSON,  
FARABOW, GARRETT,  
& DUNNER, L.L.P.  
300 I STREET, N.W.  
WASHINGTON, DC 20005  
202-408-4000